Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ZOOLOGICAL ABSTRACTS

Alexander, C. P. The crane-flies of New York. Part II. Biology and Phylogeny. *Cornell Univ. Agri. Exp. Sta.* Memoir **38**: 704–1129. 1920. An extensive contribution to the general biology of the Tipulidae containing many data of ecological bearing. P. S. Welch.

Arey, L. B., and **W. J. Crozier.** Natural history of Onchidium. *J. Exper. Zool.*, **32**: 443–502. 1921. *Onchidium floridanum* Dall is a nudibranch mollusk that lives in crevices in rocks situated in the between-tide zone on ocean beaches. Colonies of about a dozen live in a single crevice. Each individual leaves the crevice to feed for about an hour during each twenty-four hours. After feeding it returns to its "home" crevice and will not remain in any other crevice. Homing is due to contact-odor stimulation, and there is no evidence of associative memory. A. S. Pearse.

Barney, R. L., and **B. J. Anson.** Relation of certain aquatic plants to oxygen supply and to capacity of small ponds to support the top-minnow (*Gambusia affinis*). *Trans. Amer. Fish. Soc.*, **1920**: 268–278. 1921. The authors found that submerged vegetation increased the dissolved oxygen content of ponds, while a mat of surface vegetation greatly decreased the oxygen supply, each case being compared with that of a pond having no visible vegetation. In a similar set of artificial ponds, the Gambusia production was found to be increased in ponds with submerged vegetation and decreased in those covered with surface vegetation. The influence of other factors was unfortunately not determined, the effect of the vegetation on the food of the fish being alone considered, and not in a convincing manner. C. L. Hubbs.

Bergtold, W. H. The English Sparrow (*Passer domesticus*) and the motor vehicle. *Auk*, **38**: 244–250. 1921. The author finds a decrease in the number of English Sparrows in the city of Denver, due to the introduction of motor vehicles in traffic, and the displacement of the horse, upon whose fecal droppings the sparrow chiefly subsists. T. C. Stephens.

Cole, A. E. Oxygen supply of certain animals living in water containing no dissolved oxygen. *Journ. Exp. Zool.*, **33**: 293–320. 1921. An attempt to solve the oxygen problem of animals living at the bottom of certain inland lakes during the summer stagnation period. Attention is devoted mainly to the larvae of *Chironomus tentans.* An oxidizing substance, possibly atomic oxygen, may form the necessary oxygen supply. P. S. Welch.

Gross, Alfred O. The Dickcissel (*Spiza americana*) of the Illinois prairies. *Auk*, **38**: 1–26, 163–184. 1921. This paper includes data from a census survey in Illinois, showing distribution by crop habitats, and in latitudinal portions of the state. As to food the author found that immature Dickcissels, whose adult food has been found to be largely animal matter (insects), consisted largely of vegetable matter (seeds), and explains this on the basis of lack of skill and adeptness of the young birds. The author estimates that the more than a million Dickcissels of Illinois consume 100,000,000 insects per day, which means the saving of $4,680.00 worth of hay daily. T. C. Stephens.

Hecht, Selig. The photochemistry of the sensitivity of animals to light. *Science*, n. s., **53**: 347–352. 1921. A general summing up of the work done on the photosensory activities of animals by the author up to the time the article was written is given (*Journ. Gen. Physiol.*, **1**: 147–166, 545–558, 657–666, 667–685; **2**: 299–246, 337–347, 499–

517, and *Proc. Nat. Acad. Sci.*, **6**: 112–115). It has been shown: (1) when exposed to light, *Ciona intestinalis* and *Mya arenaria* respond only after a measurable interval, which is usually longer than one and a half seconds; (2) the animals will respond to light only of increased intensity; (3) after a response the same intensity fails to produce any additional effect; (4) the animal when placed in the dark very soon recovers its sensitivity to light. The action of light, in its photosensory effect, depends on intensity and time. If intensity alone is varied, the effect is proportional to the logarithm of the intensity. If time alone is varied, the effect is proportional to the time. When both the intensity and time are varied, the photochemical effect is equal to the product of their separate activities: $V = kt \log I$. E. B. Powers.

Juday, Chancey. Observations on the larvae of *Corethra punctipennis* Say. *Biol. Bull.*, **40**: 271–286. 1921. Relation of the larvae of *Corethra punctipennis* to the biological complex of Lake Mendota and certain neighboring lakes. Quantitative data for both deep and shallow water extend over the entire year. Gravimetric and chemical results are included. A distinct contribution to the problem of biological productivity. P. S. Welch.

Nelson, Edward W. Lower California and its natural resources. *Mem. Natl. Acad. Sci.*, **16**: No. 1. 194 pp., 34 pls. 1921. In Lower California five natural faunal areas are recognized: San Pedro Martir, San Diegan, Colorado Desert, Vizcaino Desert, and Cape. These subordinate faunal districts are partly independent of the distribution of the life-zones, of which Arid Tropical, Upper Sonoran, Lower Sonoran, and Transition are recognized; an infusion of Canadian species is found on the higher mountains. Lists are given of the characteristic birds, mammals, and plants. Detailed descriptions are given of physiography and vegetation. L. R. Dice.

Powers, Edwin B. The variation of the condition of sea-water, especially the hydrogen-ion concentration, and its relation to marine organisms. *Publ. Puget Sound Biol. Sta.*, **2**: 369–385. 1920. Powers deals with the variations in pH and dissolved oxygen in Puget Sound. He found the relation of these factors to one another and to the hydrographic features of the region to be very complex, owing to the strong currents of the region. In the vegetation along shore the pH and oxygen content are subject to larger and more rapid fluctuations than in open water. C. L. Hubbs.

Powers, Edwin B. Experiments and observations on the behavior of marine fishes toward the hydrogen-ion concentration of the sea-water in relation to their migratory movements and habitat. *Publ. Puget Sound Biol. Sta.*, **3**: 1–22. 1921. The author finds that "the fishes which live on the bottom and among vegetation," "in definite habitats irrespective of the pH of the water," "did not react to a gradient of hydrogen-ion concentration," and he concludes that such fishes "select their habitats by factors other than the hydrogen-ion concentration of the water." The three free-swimming species studied reacted quickly and specifically to the pH gradient, and "were always found in water having a pH at or near that to which they reacted positively in the experiment." Powers concluded that the hydrogen-ion concentration or CO_2 tension of the water is a factor in the habitat selection and migration of such types. The investigation was admirably executed, and the report is supplemented by remarks on the physiological factors involved, and by a useful bibliography. C. L. Hubbs.

Richardson, R. E. The small bottom and shore fauna of the middle and lower Illinois River and its connecting lakes, Chillicothe to Grafton; its valuation; its source of food supply; and its relation to the fishery. *Bull. Ill. Nat. Hist. Surv.*, **13**: 363–554, 1 chart, 9 maps. 1921. This is an admirable quantitative study of the fauna and productiveness of a river. The bottom animals, chiefly mollusks, are most abundant where there is least current and most mud. The plankton passing Havana is about

200,000 tons (wet) per year, or 20 to 50 times the total dry weight of the flesh of the bottom animals in the 138 miles above the mouth of the river. The total wet weight of bottom animals (without mollusk shells) in different miles varied from 10.4 to 5,196 pounds per acre. Analyses show that the nitrogen content of the bottom sediments is many hundred times that of the flesh of animals living in them. A. S. Pearse.

Sumner, Francis B. Desert and lava-dwelling mice, and the problem of protective coloration in mammals. *Journ. Mammalogy,* **2**: 75–86, pl. 6. 1921. Fifty specimens of canyon mouse (*Peromyscus crinitus stephensi*) from an isolated field of very dark lava rock in the Mojave Desert are not appreciably different in coloration, as determined by the tint photometer, from an equal number of specimens from a region of pale colored rocks in the same desert. As the species is restricted to rocky places the colony on the lava field must have been isolated by the surrounding sand for a long period of time. Its failure to change in color to approach that of its dark substratum throws doubt on the explanation of protective coloration, derived through the action of natural selection, applied to local color races of mammals, especially those which occur on lava fields. L. R. Dice.

Swarth, H. S. Revision of the avian genus *Passerella,* with special reference to the distribution and migration of the races in California. *Univ. Calif. Publ. Zool.,* **21**: 75–224. 1920. A remarkably careful and painstaking systematic analysis of one genus of birds, the Fox Sparrows. The very precise determination of the distribution of the various geographical races recognized in the one species of this genus, together with the great range in climatic and biotic variation in their habitats, makes an inquiry into the relation between the two germane. The author offers some observations upon this subject, and concludes that humidity in the breeding area is not the cause of melanistic tendency; but, "taking the whole year through, it is evident that the darkest colored forms (*annectens, townsendi,* and *fuliginosa*) are under more or less humid conditions continuously, and during the winter months under an extreme of such exposure. Of the paler colored races (*unalaschcensis, insularis,* and *sinuosa*), one at least (*sinuosa*) nests in a region of extremely heavy precipitation, and the others where fogs and cloudy weather prevail much of the time, but they all spend the winter, a longer period than the nesting season, in an arid portion of the country" (p. 95). A further analysis of physical factors is brought to bear upon the facts of migratory movement of the various geographical races of this group. Studies of this kind go far to justify the recognition and designation of subspecies, which otherwise have little meaning. T. C. Stephens.

Ward, Henry B. Some features in the migration of the sockeye salmon and their practical significance. *Trans. Amer. Fish. Soc.,* **1920**: 387–426. 1921. In this paper as elsewhere, Dr. Ward has with much justice criticized the vagueness of most theories which have been proposed to explain the anadromous spawning migrations of salmonoid fishes. He has made an effort to determine the physical factors responsible for the movements of one of these fishes, the sockeye salmon, in fresh water. While the general method of attack seems both sound and promising, the reviewer is of the opinion that the data obtained by the author (he considered only temperature in detail) is yet too meager to justify the drawing of extensive conclusions, particularly as, in the present case, the conclusions seem rather discordant with the large volume of critical data obtained by Gilbert and others on the general life history and migration of these fishes. C. L. Hubbs.

Wilson, C. B. Dragonflies and damselflies in relation to pondfish culture, with a list of those found near Fairport, Iowa. *Bull. Bur. Fish.,* **36**: 185–264, 3 pls., 63 figs. 1920. An ecological consideration of the relation of odonate nymphs and adults to pond culture of food fishes. Food relations receive special attention. P. S. Welch.

Collaborators for Zoological Abstracts and their subjects are as follows:

Chas. C. Adams—General principles.
W. C. Allee—Animal behavior.
F. C. Baker—Mollusks.
W. M. Barrows—Arachnids.
R. N. Chapman—Insects.
W. J. Crozier—Marine Invertebrates.
L. R. Dice—Distribution; Mammals.
G. S. Dodds—Crustaceans.
S. A. Graham—Forest insects.
C. L. Hubbs—Oceanography; Fishes.
Chancey Juday—Limnology.
G. R. LaRue—Parasitology.
E. B. Powers—Physiological ecology.
A. G. Ruthven—Reptiles; Amphibians.
Frank Smith—Annelida; Fresh-water sponges.
T. C. Stephens—Birds.
P. S. Welch—Aquatic insects.

Authors publishing papers of general ecological interest will confer a favor by sending reprints to the proper collaborator. If in doubt the paper may be sent to Lee R. Dice, University of Michigan, who will see that it reaches the proper person. It is especially desirable to have attention called to papers published elsewhere than in the usual zoological periodicals.

NOTES AND COMMENT

Summer Meeting for 1922

The 1922 Summer Meeting of the Ecological Society of America will be held in affiliation with the American Association for the Advancement of Science at Salt Lake City, Utah, June 22 to 24, inclusive. In addition to an independent meeting, the Ecological Society will meet jointly with the Western Society of Naturalists. A series of field trips in the interesting region surrounding Salt Lake City is being planned by the local committee. The program is in charge of Dr. A. G. Vestal, Stanford University, California, Western Secretary, to whom titles of papers should be sent as soon as possible.

Field Meetings

During the first years of the organization of the Ecological Society one of its prominent activities was the organization of ecological field trips, particularly during the summer. One such trip was conducted this year, with great success, in connection with the meeting at Tucson, Arizona, of the Southwestern Division of the American Association. Other similar trips are planned in connection with the Salt Lake City meeting. The Secretary will be glad to assist in the organization of, and give due publicity to additional excursions to be held under the direction of members of the Society.

Weir Mitchell Station of Harpswell Laboratory

The Weir Mitchell Station of the Harpswell Laboratory, which was established on Mt. Desert Island, Maine, last summer (Ecology 2: 234, 1921), will open for research on June 25. The non-toxic salt water supply is being installed, and will be ready at that time.